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EXAMINER

NGUYEN, MERILYN P

ART UNIT PAPER NUMBER

2163

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,799

Applicant(s)

KOBAYASHI ET AL.

Examiner

Merilyn P. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09/24/03&12/13/03.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Detailed Action.

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DETAILED ACTION

1. Claims 1-12 are pending in this action as the result of the withdrawal of claims 13-20.
2. This application claims priority of Japanese applications #2002-291970 filed 04 October 2002.

Acknowledges

3. Receipt is acknowledged of the following items:
 - Information Disclosure Statement (IDS) filed on 09/24/2003 and 12/13/2003 and made of record. The references cited on the PTOL 1449 form have been considered.

Election/Restrictions

4. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-12 are drawn to a data retrieval system, classified in class 707, subclass 3.
 - II. Claims 13-20 are drawn to a graphical user interface system for displaying the computer retrieved data by classifying data into clusters and displaying classified clusters, classified in class 382, subclass 225.
5. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instance case, invention I discloses a data retrieval system being used

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for retrieving data being stored in a database. Invention II discloses a graphical user interface system being used for displaying the computer retrieval data by classifying data into clusters and displaying classified clusters. See MPEP 806.05(d).

6. Because inventions are distinct for reasons given above and have acquired separate status in the art as shown their different classification, restriction for examination purpose as indicated is proper.

7. During telephone conversation with Mr. Richard M. Goldman, Reg. No 25,585 on March 16, 2006, provisional election was made without traverse to prosecute the invention of Group I claims 1-12. Affirmation of this election must be made by applicant in replying to this Office Action. The claims 13-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

8. Applicants is reminded that upon the cancellation of claims to be non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48 (b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48 (b) and by the fee required under 37 CFR 1.17 (i).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claimed invention (Claims 1-12) recites retrieving data stored in a database by reading out data from the database and computing covariance matrix, eigenvector and residual vector using said data which do not provide tangible results. The claims reading out data from the database and doing some mathematically calculations on the data without any outcome result suggesting what these calculations are being applied on.

Claims 7-9 recite a computer executable program that are not tangible embodied on a computer readable medium.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-24 and 26-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, lines 8, claims 4 and 7, lines 10 and 12 and claim 10, lines 11 and 13, the phrase "contribution" renders the claim(s) indefinite because it is unclear what meant by calculating/storing a contribution. The term "contribution" is vague and indefinite, thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

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Regarding claims 1, 4, 7 and 10, the phrase “residual vector” renders the claim indefinite because it is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree.

Regarding claims 1, 3-8 and 10-11, these claims is indefinite in that it fails to point out what is included or excluded by the claim language. The claims recite “database” and “memory” and recite several reading and storing operations; however, it’s unclear where “storing a set of basic vectors” takes place in database or memory? Does Applicant mean “database” and “memory” as two different storages? If they are two different storages, the limitation of “reading out **said data** and at least one of **said eigenvectors from a memory**” renders the claims ominous as to “said data” is the data of “database” and since “said data” and “said eigenvectors” is not stored in “a memory” previously, therefore, no way to reading out “said data” and “said eigenvectors” from “a memory”.

Regarding claims 1, 2, 5, 6, 8, and 11, the claims are being incomplete because the claims recite “ a keyword to be used for labeling” however what labeled is not described in the claims.

Regarding claims 1, it’s unclear whether the term “a memory” at line 12 is different than “a memory” at line 7.

Regarding claims 1, 4, 7, and 10, there is insufficient antecedent basis for “said computed eigenvectors” because only one eigenvector is computed.

Regarding claims 5, 7, 10, the claim is incomplete as it’s unclear where “a new eigenvector” is stored.

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Regarding claim 10, the steps of “generating and storing a set of basic vectors from a set of said computed eigenvectors” and “generating and storing a set of basic vectors from a set of computed eigenvectors” appear to Examiner as duplicated steps as to no distinguish between them.

Due to the vagueness and a lack of clear definition of the terminology and phrases used in the specification and claims, and due to the incomplete relationship between limitations, the claims have been treated on their merits as best understood by the examiner.

The Applicant is responsible for fixing all other 112 problems if it exists in the claims beside those that the Examiner addressed above.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Marchisio (US 6,510,406).

Regarding claims 1, 4, 5, 7, 8, 10 and 11, Marchisio discloses a data retrieval system for causing a computer to retrieve data being stored in a database (See Fig. 2), said retrieval system comprising:

- a database storing data as a vector (**query vector**) digitized based on a keyword (**user query consisting of a list of keywords or phrases**). See col. 7, lines 28-37 and col. 8, lines 64-67;

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- a means for generating a residual vector (**errors in the input query vector**) from said data to compute a covariance matrix and an eigenvector of said covariance matrix (**See col. 7, lines 40-45 and col. 14, lines 25-35 and col. 12, lines 1-7**), and for generating and storing a set of basic vectors (**orthonormal eigenvectors**) from a set of said computed eigenvectors (**See col. 11, lines 20-25 and col. 12, lines 1-7**);
- a means for reading out said data and at least one of said eigenvectors from a memory (**See col. 11, lines 23-25**), and for computing a contribution of said eigenvector to said data (**See col. 12, lines 15-18**), and for contracting or enlarging (**allowing error...margin of uncertainty...margin of error or a certain degree of flexibility**) a residual vector to store (**See col. 14, lines 25-35**); and
- a means for selecting a keyword to be used for labeling according to a similarity between said stored basic vector and said data (**See col. 11, lines 4-46 and col. 15, lines 30-50**), and a weight on said similarity so as to store the keyword in a memory (**See col. 8, lines 23-32**).

Regarding claims 2, 9 and 12, Marchisio discloses making said basic vectors orthogonal (**See col. 12, lines 1-7**).

Regarding claims 3 and 6, Marchisio discloses means for determining the weight on said similarity to said keyword and a means for storing a certain number of keywords in a descending

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order in the memory in connection with said weight. See col. 8, lines 17-20 and col. 15, lines 26-31 and col. 17, lines 10-14.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lundahl U.S Patent No. 6,636,862 discloses method and system for the dynamic analysis of data.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Merilyn P Nguyen whose telephone number is 571-272-4026.

The examiner can normally be reached on M-F: 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

MN

MN

March 31, 2006



DON WONG
SUPERVISORY PATENT EXAMINER